

LAD CASE STUDY

Is it Possible to Say No to China? The Case of the Kirchner-Cepernic Dams in Argentine Patagonia

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LAD

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In November 2015, newly elected Argentine President Mauricio Macri announced suspension of construction on the Kirchner-Cepernic mega dams. Located on the Santa Cruz River near the famous Perito Moreno Glacier (UNESCO World Heritage Site) that feeds from the same river, the project was judged unacceptable due to its potential impact on the environment. An agreement for construction of the dams had been signed during the administration of Cristina Fernandez de Kirchner with the Chinese company Gezhouba, financed by three Chinese banks - China Development Bank (CDB), Bank of China (BoC), and the Industrial and Commercial Bank of China (ICBC).

The two dams were to be constructed over five years at a cost of US\$ 4.7 billion. They would generate 5% of the national energy demand and employ 5,000 people during construction. The dams would also flood more than 47,000 hectares of land in order to install 11 turbines with a capacity of 1,740 MW. In defense of the glaciers and the native Patagonian fauna, environmental organizations and prominent national figures organized opposition to the project. In addition to the negative environmental impact, critics pointed out the project's apparent lack of financial advantage for the nation. According to energy experts, extensive funds would be spent to build dams that might operate at the maximum capacity of 1,740 MW of power for only one third of the year. Moreover, since the current capacity of high-voltage power transmission lines would only allow transmission of 45% of the energy generated by the dams, additional investment would be required for building a new transmission line.

When Macri announced suspension of the project, the Chinese banks had already made the first disbursements. Upon learning of the new government's decision, the Chinese government threatened to cancel all loans to Argentina. On March 10, 2016, Beijing sent a letter to the Finance Minister, Alfonso Prat-Gay, from the lawyers of the China Development Bank Corporation requesting clarification of the future of agreements related to the US\$ 4.714 billion Kirchner-Cepernic dams project as well as of the US\$ 2.099 billion Belgrano Cargas Railway project agreed upon in 2014. The note said: *"The Kirchner-Cepernic dams and the Belgrano Cargas are major projects promoted by the Chinese Communist Party and signed during the same political time period in Argentina and each one of the payment facility agreements of the dams together with those of the Belgrano Cargas project contain cross default clauses."*ⁱⁱ This means that if either the Kirchner-Cepernic project or the Belgrano Cargas project defaults, financing for both projects goes into default.

On December 21, 2016, ruling in favor of NGO appeals to halt the project, the Argentine Supreme Court of Justice called for a public hearing at which all voices could be heard before the government made a final decision. Meanwhile Macri asked several Argentine universities to modify the original project so as to reduce the environmental impact of the dams and thus avoid

Juan Lucci conducted interviews and prepared this case under the supervision of Francis Fukuyama of Stanford University. This case was developed solely as a basis for class discussion. It is not intended to serve as a historical record, a source of primary data, or an illustration of effective or ineffective management.

the cross default with China. The 1,740 MW project was subsequently converted into a 1,290 MW complex. The number of turbines in each dam was reduced: Néstor Kirchner would have five instead of six turbines, and Jorge Cepernic three instead of five turbines.

The public hearing was held on July 16, 2017. Non-profits and environmental groups once again asserted that the project, with or without modifications, would have irreversible environmental and social impacts. Furthermore, the indigenous community affirmed that the project's location in sacred land violates the Constitution and would strongly impact their lifestyle.

The new administration of Mauricio Macri has improved relationships with the governments of the United States and European Union, opening the door to new credits unavailable to the government of Cristina Kirchner. However, the country's economic situation remains delicate, the unemployment rate having increased after the first year of government. This situation leaves President Macri at a crossroads. He must decide between continuation of a financially unattractive mega project with strong environmental and social impacts, or cancellation of the contract signed with China and loss of Chinese financing for other important infrastructure projects that increase economic activity and create new jobs. Today, August 1, 2017, the president must make a decision. Will he say no to China?

Political and Economic Context

In October 2007, after four years of government of her husband Néstor Kirchner, Cristina Fernández de Kirchner won the presidential election. For 12 years before obtaining the presidency, Néstor Kirchner was governor of the Province of Santa Cruz (1991-2003), where the dams project is located. During the presidency of Néstor Kirchner and Cristina Kirchner's first term, Argentina benefited from the increase in the global prices of commodities and achieved a significant poverty reduction between 2004 and 2008ⁱⁱ. The income of the most vulnerable grew at an annual rate of 11.8%, faster than the average regional growth of 7.6%. This trend continued, but declined after 2008, when the economy began to deteriorate due to lack of foreign investment, high inflation, energy crises, and extensive flight of capital.

After winning the election of 2011, in order to stop the flight of foreign currency, Cristina Kirchner's government limited the purchase of foreign currency, which also made it impossible for investors to turn their profits in dollars abroad. This caused a parallel market in acquisition of foreign currency, called the *blue dollar*, which fluctuated strongly during the four years of her second government. The currency measure, plus the lack of international confidence, worsened by rapprochement with the ALBA countries (Venezuela, Ecuador, Bolivia, Nicaragua and Cuba) and rising inflation, brought Argentina one of the lowest investment rates in the Americas.

In 2013, the amount allocated to public service subsidies represented 20% of the federal budget and almost 5% of national GDP. The subsequent fiscal deficit was propelled not only by energy subsidies and social spending, but also by increasingly low tax collection during Cristina Kirchner's second term. In addition, inflation rose sharply during her second term, leaving the government with cumulative annual inflation of 35%, according to the National Congress index (since the official figures were adulterated). By the end of her term, Argentina entered into technical default due to the government's refusal to pay vulture funds (funds that bought bonds at

discounted price after Argentina defaulted in 2002 and demanded repayment in full instead of accepting the debt swaps of 2005 and 2010)ⁱⁱⁱ. Cristina Kirchner also left the government with low foreign debt (mainly because Argentina had closed the international credit markets) and low unemployment (close to 8%).

In 2015, Mauricio Macri defeated the Peronist candidate and assumed the presidency in alliance with two parties, the Civic Coalition (CC) and the Radical Civic Union (UCR, for its Spanish acronym). However, Macri did not obtain a parliamentary majority in either of the two chambers of the National Congress, and faces an opposition led by former president Cristina Kirchner. Following Macri's assumption of office, this opposition has held constant protests in the most important urban centers, creating a climate of political instability. Since 1928, a non-Peronist government has never managed to complete a presidential term^{iv}. Macri also lacks support from regional governors. Only five out of the 24 sub-national districts respond to the president's coalition.

In the first year of the government, Macri terminated currency controls and negotiated payment to the vulture funds in order to exit default. The new administration moved quickly to implement key reforms such as modernization of the import regime, deceleration of inflation, and reform of the national statistics system. In addition, Argentina resumed an active agenda in international politics and will hold the presidency of the G-20 in 2018. Furthermore, Argentina has inaugurated a role as observer in the Pacific Alliance and has stated its intention to join the Organization for Economic Cooperation and Development (OECD).

In 2016, according to various surveys, unemployment became a main concern of Argentines. After an economic contraction of 2.2% in 2016, concentrated mainly in the first half of the year, the economy began to recover. In effect, the GDP grew 2.7% in the first half of 2017 (year-on-year) and this tendency is expected to continue in the second part of the year. The fiscal deficit for 2016 was 4.3% of GDP, compared to 6% in 2015. The Government plans a gradual convergence to a primary fiscal balance by 2021.

China - Argentina Relations

On February 19, 1972, China and Argentina established diplomatic relations and in 1977, the two governments signed their first trade agreement. The deepening of ties with China has been one of the central legacies of Néstor Kirchner and Cristina Kirchner's foreign policy. China is currently one of the largest trading partners of Argentina, only behind Brazil, both in exports and imports. Argentine exports to China grew between 2001 and 2011, but from 2011 onward began to fall.

China's interest in Argentina is not new. A 2013 report by the Argentine Council for International Relations (CARI, for its Spanish acronym) indicates that the Asian country has become the third largest investor in Argentina, following the United States and Spain. Although soybeans remain China's main interest in Argentina, in recent years the communist country has also come to occupy an important role in the Argentine energy sector. Thanks to a series of multimillion-dollar acquisitions, the China National Offshore Oil Corporation (CNOOC) became the second largest oil company in Argentina, second only to the state-owned YPF.

During her trip to Beijing in July 2010, Cristina Kirchner signed contracts for railway projects in Argentina totaling US\$ 10 billion. The agreement specified that China would invest in repairing and refurbishing existing branches, purchasing wagons and engines from CNR, and investing in Belgrano Norte and Belgrano Sur branch lines.

In June 2012, during another of Cristina's visits to China, a Joint Declaration between the two governments was signed to frame binding agreements on energy, mining, agriculture and transport issues. During this visit, the two countries began negotiations concerning large infrastructure projects. In July 2014, after the visit of Xi Jinping to Argentina, the "Framework Agreement of Cooperation in Economic and Investment Matters between the Government of the Argentine Republic and the Government of the People's Republic of China" was signed, upgrading the bilateral relationship to "Integral Strategic Association." This agreement was signed in the middle of the Argentine crisis over vulture funds and the declaration of technical default, opening the door to Chinese financing of several projects.

The most important agreements signed in 2014 were the Kirchner-Cepernic Dams (KCD) and the Belgrano Cargas projects (Trenes Argentinos Cargas y Logística). The KCD included the financing of the 100% of the project, whereas the Belgrano Cargas obtained 85% of the project cost (US\$ 2099 million) through a syndicated loan involving the China Development Bank and the ICBC bank.

Date	Purpose	Lender	Amount (US\$)
August 2007	Export sector development	China Development Bank (CDB)	30M
January 2010	Renewal of 2007 loan	China Development Bank	30M
July 2010	Train system	CDB and others	10B
July 2010	High-speed trains	CDB and CITIC	273M
March 2012	Renewable energy projects	China Development Bank	200M
July 2014	Hydroelectric dam construction	CDB, ICBC, Bank of China	2.5B
July 2014	Belgrano Cargas train line	CDB, ICBC	2.1B
August 2014	Purchase of cards for metro line	China Ex-Im Bank	162M

Source: Inter-American Dialogue

The Cooperation Framework Agreement was ratified by the National Congress of Argentina in an express session on March 2015. Article 4 of the bill, ("Cooperation in the field of industrial investment"), authorized the government "to promote cooperation on investment of Chinese companies within the Argentine territory in order to increase the productive capacity of the Argentine industry in sectors of great potential of export to the Chinese market." Article 5 established the basis for joint infrastructure projects, including this controversial section: *"the acquisitions within the framework of the projects of the Argentine public sector (...) may be made through the direct award provided they are subject to concessional financing from the Chinese side and that the awarding is made under advantageous conditions of quality and price."*^v This article gave the Argentine president the executive power to negotiate future contracts with China without the authorization of the Congress. The leader of the PRO party in the House (the party of current president Macri), Federico Pinedo, warned that *"it is quite unusual to have so many votes*

against an international treaty" and stressed that "the bill states that other agreements can be made without intervention of the Congress, which would be unconstitutional."^{vi}

Finally, China and Argentina agreed on a financial swap of US\$ 11 billion to maintain the stability of the Argentine exchange system. In 2014, a decline in the price of soybeans resulted in a 20% drop in Argentine exports, which caused an additional deficit of dollars in the economy (in October 2014, the stock of currencies registered a drop of approximately US\$ 3,000 million with respect to the end of 2013, reaching a floor of US\$ 27,500 million). After the agreement in October 2014, the reserves recorded a systematic increase, reaching a stock of US\$ 31,000 million by the end of that year. During the first half of 2015, international reserves grew by US\$ 2,400 million to a total of US\$ 33,850 million.^{vii}

After taking office, Macri announced the suspension of US\$ 950 million worth of projects already signed and Chinese-Argentine relations grew strained.

Energy Crisis

The electricity sector in Argentina is the third largest energy market in Latin America. The installed capacity by source in 2016 was: 62.65% conventional thermal sources, 32.23% hydroelectric sources, 5.3% nuclear energy, and 2.11% renewable sources.

Source		Power (MW)		Percentage (%)	
Fossil Fuel	Combined Cycle	9.227	20.764	27.84%	62.65%
	Gas Turbine	5.251		15.84%	
	Steam Turbine	4.451		13.43%	
	Diesel Engine	1.834		5.53%	
Hydro		10.682		32.23%	
Nuclear		1.755		5.3%	
Renewable	Solar	8	700	0.02%	2.11%
	Wind	187		0.56%	
	Small Hydro (less than 50MW)	488		1.47%	
	Bio Gas	17		0.05%	
Total		33.141 MW		100%	

Source: Argentine Ministry of Energy and Mining

Annex I lists the country's hydroelectric plants by capacity and location.

The demand for electricity grew steadily from 1991 to 2015, dropping during the economic crisis of 2001-2002 but followed by a rapid recovery (6-8% annual increase) due to the economic recovery. Residential consumption accounts for 29% of the total, and industrial and commercial consumption account for 43% and 26% respectively.

During the Kirchners' administrations, Argentina went from being an exporter of energy to becoming a large importer in order to maintain thermal power plants. In 2011, after more than 20

years of surplus and achieving record exports, the country lost self-sufficiency in gas and oil products and now has to depend on imports (Annex II shows the energy trading balance between 1999 and 2015). This crisis experienced by the sector led to today's domestic gas production that is adequate to cover only 75% of the demand, while the remaining 25% must be imported.

The Kirchners' decision to freeze utility tariffs at prices well below cost forced energy companies to the brink of bankruptcy. Edenor, Edesur and Edelap (the three largest electricity companies) accumulated losses in the order of AR\$ 2,000 million (~ US\$ 350 million) in 2012. This meant that energy companies could not invest in response to the large increases in electricity demand. Alieto Guadagni, former National Secretary of Energy, argued: *"Edenor, Edesur and their peers across the country, just raise to cover maintenance costs. Technically they are bankrupted. The lack of tariff updates has affected all the sector in the industry."*^{viii}

The lack of investment in power generation was also accompanied by a lack of investment in power distribution. The result was major energy crises with frequent power cuts throughout the country, especially during the summer months when consumption is higher. Guadagni points out that -according to data from the Secretary of Energy - from 2003 to 2015 users' claims were six-fold and the hours of cuts multiplied by four^{ix}.

At the beginning of his mandate, the government of Mauricio Macri declared an energy emergency. Development of renewable sources to contribute to growth of the local market for clean energy was established as a State priority. Prior to that, in 2015, the National Promotion Regime for the Use of Renewable Sources Act (Law 27.191) was passed, declaring that generation of electric power from clean sources was of national interest. The norm was established that 8% of the national electricity must come from renewables by December 31, 2018, and 20% by 2025. The government significantly reduced energy subsidies, which led to a great increase in utility tariffs.

Argentina is Back on the World Stage

One of Mauricio Macri's major campaign promises was restoring Argentina's position on the world stage and thus increasing foreign investment in the country. The government changed direction in foreign policy, especially in its relationship with the United States, Europe and Latin America, substantially improving its relations with the U.S., and signing several bilateral agreements. These developments materialized with Obama's visit to Argentina, only months after Macri took office. The U.S. opened the door to new Argentine products, including lemons (an emblematic case in the bilateral relationship) and granted migratory benefits to Argentina (Global Entry), while Argentina eliminated the visa requirement for Americans. Relations with Europe also focused and materialized in the visits of the French president, the German chancellor and the Italian prime minister during the first year of Macri's government. The European leaders offered their support to the new Argentine government. On the other hand, Argentina changed course in its policy towards the neighboring region, denouncing the suspension of democracy and human rights violations in Venezuela. Argentina clearly moved away from the ALBA bloc and propelled the suspension of Venezuela from MERCOSUR (which took place in 2017).

The return to the world also had positive consequences in the field of external financing. After

years of not approving new projects, the World Bank approved projects of US \$6 billion for Argentina in 2016 and the Inter-American Development Bank US\$ 2.1 billion for 2017 (a historical record). Among the financing granted, 960 million dollars was designated to improve water and sanitation services in Greater Buenos Aires, one of the poorest regions in the country. Moreover, the IDB also announced that it has granted 50 million dollars to improve public statistics. This funding helps the country to take a new step towards the Organization for Economic Cooperation and Development (OECD), after formalization of the application to join the organization made by Macri's government a year ago.

On the other hand, foreign investment has remained low in most sectors during 2016 and 2017 (except for the renewable energy sector). According to the government, investors are still cautious due to Cristina Kirchner's continuing high positive image in the polls (around 35%) and the fear that she could return to power.

The Kirchner-Cepernic Dams

The Kirchner-Cepernic dams' projects are located on the Santa Cruz River (Annex III shows map of the location). The river comprises a sinuous water course of 385 km, which originates in the Argentino Lake and is fed by the melting of the glaciers of the Los Glaciares National Park, meandering through the plateau until it flows into the Atlantic. It remains virgin topography, testimony of the last glaciations, studied by famous naturalists such as Charles Darwin.

The Néstor Kirchner dam project (NKD) is located 130 kilometers from the city of El Calafate and would be 70 meters high with a power generation capacity of 950 MW. It consists of 5 Francis turbines with an annual generation of 3380 GW/h. The wall would be 1900 meters long and the surface of the reservoir would be 250 square kilometers.

The Jorge Cepernic Dam (JCD) is located 170 kilometers from the city of Comandante Luis Piedra Buena. It would be 45 meters high and have an installed capacity of 360 MW. The wall would extend 2700 meters. The powerhouse is composed of 3 Kaplan turbines that would produce 1903 GW/h per year. The surface of the reservoir would be 200 square kilometers.

History

The dams were first mooted in 1950. The military regime studied their feasibility in the 1970s, but did not move forward with the project. Cristina Kirchner's government relaunched the dams project in 2007 under the names Condor Cliff and Barrancosa. At that time, the calculated costs were 35% less than the current budget. In the summer of 2007, a provincial tender was held to build the Cónдор Cliff and Barrancosa power plants and on April 14, 2008, a public hearing took place to open tenders for construction of the hydroelectric dams. However, due to the 2008 crisis, the project was scrapped citing a lack of funds.

In 2010 a second tender was launched. The objective set by the provincial government for the selection of a consortium of companies was to obtain a business group that would build, finance and subsequently operate the complex and exploit the natural resource through a concession. A

consortium made up of Impsa, Corporación América and the Brazilian group Camargo Correa won the tender. The offer was AR\$ 16,400 million (~US\$ 4.100 million). The Legislature of Santa Cruz approved the project with a law. However, the federal government surprisingly denied the funds to begin the work. The super-minister of the Kirchners, Julio De Vido (Minister of Planning and Infrastructure, 2003-2015) quietly halted the entire project. The Santa Cruz government, responding to the orders of De Vido, and the winning consortium, agreed to "terminate the process for reasons beyond both parties and without any kind of compensation claim." According to several journalists and politicians, the reason for cancellation of the contract was China's interest in the project. From that point on, instead of being managed by the province, the business came under the jurisdiction of the national government.

On April 20, 2012, a new call for national and international public bids for the construction of the hydroelectric dams was conducted. The dams were renamed Nestor Kirchner and Jorge Cepernic, in memory of President Cristina Kirchner's husband (who died in 2010) and a former governor of Santa Cruz. On January 10, 2013, tenders for the construction of the hydroelectric dams were opened. Five consortiums were formed but only four of them had their technical proposal approved. These were:

Consortium	CEO	Lender
Austral Construcciones, Chediak, Esuco, Sinohydro and Iecsa	Lazaro Baez	Commercial Bank of China
Impsa, Odebrecht and Alstom	Enrique Pescarmona	Brazilian Development Bank
Comporación América, Panedile, Isolux Eleprint and Power Machines and Inter Rao	Eduardo Eurnekian	Russia Eximbank
Electroingeniería, Gezhouba and Hidrocuyo	Gerardo Ferreyra	China Development Bank, Bank of China, Industrial and Commercial Bank of China

Source: Author's Elaboration

On June 11, 2013, the financial offers were opened. The amount offered by Lázaro Báez, exempting the tax burden, was the most economical: AR\$ 20,479 million. It was followed by offers from Eurnekian, with AR\$ 21,817 million and Ferreyra, from Electroingeniería, with AR\$ 22,948 million. In fourth place was Pescarmona with \$ 23,992 million.^x

During the public tender, Ferreyra claimed that he had won as he had presented an unexpected discount letter. On that document Electroingeniería reduced its price by 17.4%, making Ferreyra the winner of the tender, with an offer of AR\$ 18,947 million,. According to Diego Cabot from La Nacion newspaper, the Kirchner and Cepernic dams were going to be tendered to Lázaro Báez,, but in the middle of this process a scandal, implicating Lazaro Baez in money laundering was discovered. Cristina ordered the dissolution of the tender and chose Electroingeniería and a consortium formed by the Chinese corporation Gezhouba Group Company.^{xi} Denounced by the opposition for being the figurehead of Cristina Kirchner, Lázaro Baez was imprisoned in 2015. He distanced himself from Cristina, alleging: "If you want to find the former president attached to a corruption case, it is in this agreement (referring to the Kirchner-Cepernic Dams)."^{xii}

The agreement for financing of the two dams was signed in July 2014 during Xi Jinping's visit to Argentina. The credit agreement was signed between the Ministry of Economy and the following

financial entities: China Development Bank Corporation (CDB), Industrial and Commercial Bank of China Limited (ICBC), and Bank of China Limited. On February 6, 2015, the CDB made the first disbursement of US\$ 287 million to start the work. On February 15, 2015, Cristina inaugurated the project with an "Act of Beginning of Work" signed in El Calafate. After this, the pioneer camp and other initial infrastructure was installed, and preliminary work began, including movement of land, installation of workplaces, transfer of machinery, and hiring of workers.

Gezhouba – Electroingeniería – Hidrocuyo

The winning proposal was awarded to China Gezhouba, Electroingeniería and Hidrocuyo, who formed a Transitory Union of Companies (UTE, for its Spanish acronym) called “Represas Patagonia” (Patagonia Dams). Gezhouba is a state-owned company, part of the China Energy Engineering Corporation. Gezhouba’s expertise in construction of dams, power plants, bridges, and roads has made the company one of the largest in the world. In May 2015, the World Bank Group announced the disqualification of Gezhouba and its subsidiaries for a period of 18 months due to the misconduct of the company related to water conservation, earthquake recovery and flood management in three projects financed by the Bank of China.

The construction company Electroingeniería greatly benefited from public work contracts during the Kirchner governments. Electroingeniería grew from a small company that formerly built schools in Cordoba to become one of the largest construction contractors in the country. Many have accused the company of acting as a front for the Kirchner family. Electroingeniería has enabled corruption due to overpricing in public works, including power projects, power lines and the gas pipelines of the famous Skanska case. Moreover, Electroingeniería has no experience in the construction of hydroelectric dams.

Hidrocuyo is the company with the lowest participation in the KCD project. Its function is based fundamentally on the design, calculation and assembly of power, mechanical and hydraulic electrical systems.

Benefits

The benefits of the Kirchner-Cepernic project are multiple. First, the new project would allow diversification of the energy matrix and create a large new source of baseload energy. The project could provide 4% of the total energy consumed in the country and an increase of 15% of the hydroelectricity currently generated in Argentina. This output would also reduce the importation of electric power in times of maximum demand, including imports of fossil fuel. Moreover, by reducing carbon dioxide emissions, it would help the government achieve the promises made in the Paris agreement (Argentina was one of the first countries to ratify the agreement).

Second, hydro is a well-known technology in Argentina, and there is much expertise in the field. The Kirchner-Cepernic would be the third largest hydroelectric plant in the country and therefore necessary experts to operate the plant are available.

Third, the project would generate more than 5,000 jobs during construction and boost the economy of the region. Mariano Musso, Communication Director of Electroingeniería, claimed that 92% of the contracted workers are from Santa Cruz, and that they were chosen by the UOCRA (the construction union) and the local municipalities. In addition, the province will receive 12% of electricity production royalties. This is particularly important as the province is going through a severe economic crisis and the workforce is mainly concentrated in the public sector.

Fourth, given the significant supply of electricity generated, the project would open up the possibility of expanding electricity-intensive industrial ventures in the region. It is believed that the project would boost development of tourism based on energy availability and infrastructure surrounding the dams: paved roads, reservoirs and services. The dams would also contribute to the development of agricultural, livestock and industrial enterprises. Reservoirs created in both dams could also be used for recreational activities and tourism.

Finally, an important merit of this project is that no resettlement of people is required since there is zero population in the vicinity. This factor is highly attractive to the Chinese counterpart, which has experienced large protests over resettlement as a result of hydroelectric projects in other regions of the world.

Problems:

The Kirchner-Cepernic dams project has been severely criticized for three main reasons.

Environmental Impact

The project required environmental impact studies, which were controversial from the outset. The first evaluation showed that with available information, the total impact of the project could not be calculated. It stipulated a more exhaustive investigation of the case. The second environmental impact study (EIA) showed that the project had significant impact for three main areas.

- The Argentino lake and surrounding glaciers.
- The Santa Cruz river ecosystem and its living species affected by the filling of the reservoirs.
- The camp for five thousand workers, subject to spills and contamination during construction.

After studying the project, the civil engineer Gerardo Bartolomé pointed out that the maximum height for the RNK, set at 179.80 meters above sea level, is inadequate. This height corresponds to the average level of Lake Argentino, and would cause an increase in the lake's level so that the dam could operate at maximum height making use of the flow. This could potentially erode the front of the Perito Moreno glacier (see Annex IV).

Other experts affirmed that location of the dams would affect the natural development of three Patagonian glaciers and modify a virgin topography. Glaciologist Juan Pablo Milana, who conducted field studies in the area, estimated more extensive possible effects, including potentially irreversible impacts on the Spegazzini and Upsala glaciers. Milana compared the hydroelectric project with the Futaleufú project of 1978. *"This dam, which was made to feed Aluar, flooded four lakes in a national park, buried under the water the oldest known tree species, larch of 4000 years, and removed from the map the rapids of Futaleufú, which were the water wonder of Chubut. That's why the Mapuche call it Amutui Quimei (lost beauty)."*^{xiii}

The second great concern is the flooding of 47,000 hectares. The KCD would alter the course of the Santa Cruz River, converting more than 50% of it into surface water reservoirs. This would modify the biodiversity of the estuary and strongly impact the local fauna. The Santa Cruz River forms an area of great ornithological richness. In the area affected by the estuary, there are six globally threatened species. Protection of the Maca Tobiano (*Podiceps gallardoi*) species, the most vulnerable to effects of the project, was declared a national priority when the Patagonia National Park was created in 2014^{xiv} (see Annex V)

Among the potential main effects of this project on the ecosystem, the National Parks Administration (APN, for its Spanish acronym) highlighted the severe impact on and irreversible loss of valuable biodiversity, flora, and limnologic communities. It would also impact cultural values, due to the loss of archaeological information and paleontological heritage. The APN indicated that modification of the hydrological regime of the Santa Cruz River would generate variations in the patterns of accumulation, erosion, temperature, with repercussions in the aquifers and variation in the base levels, affecting the diverse and valuable flora and fauna.

An "Environmental Compensation Plan" to mitigate the impact was offered. It included the creation of new protected areas covering 337 thousand hectares, and the closure of three open-air dumps that affect the Macá Tobiano because they feed the proliferation of competing birds such as the seagull. However, the overwhelming response of environmental NGOs was that these measures are already a state responsibility and cannot be used as a bargaining chip.

Although the KCD would generate electricity from flowing water, the project is not considered a clean source of energy because large dams have a high impact on the environment and a short lifespan due to the accumulation of sediments that renders them inoperable. According to Argentine law, only hydroelectric projects with a maximum capacity of 50MW are considered renewable energy.

Social Impact

A technical report presented by the National Commission of Places and Historical Heritage of the Ministry of Culture explained that the mitigation measures contained in EBISA's environmental impact study "are not related to the magnitude of the irreversible loss of archaeological heritage that will be caused by the construction of the dams". Civil society organizations also denounced the project on grounds that *"the dams will definitely bury underwater water paintings and petroglyphs by groups that inhabited this Steppe plateau almost*

ten thousand years ago."^{xv} A particularly sensitive site is the Yaten Guajen canyon, which in the Tehuelche language means 'painted stone' (see Annex VI). The canyon will be flooded if the Jorge Cepernic dam is built. Not only are there drawings of hands, feet and fauna on the walls of the mountains, eaves and caves, but there are also large quantities of lithic material and skeletal remains.

The construction and operation of the dams could also negatively affect the local economy, specifically the extensive sheep production. The possible restriction of access to water through expropriation of 200 meters running inland from the coastline would significantly affect local production. According to interviews with local producers, it is essential that herds have access to the Santa Cruz River during the winter season, as all other water sources are frozen.

The infrastructure and public services of affected localities may be impacted by population increases. Increased traffic along rural roads and the opening of new roads can favor cattle rustling, home theft, and damage to rural infrastructure. Surveys conducted in the affected region showed that local population feared an increase of robbery and prostitution in the area.

Representatives of the indigenous peoples of the area also opposed the project and affirmed that it is sacred land. Sergio Nahuelquir, from the Tehuelche Mapu Per Jur community, said: *"We totally disagree with the construction of these mega-dams, especially in the way they want to move forward and install on the Santa Cruz River, since it does not coincide with the way of life that original peoples have. We are not used to mortgage, restrict, sell or compromise the future of our populations. The idea of conditioning biodiversity does not seem acceptable to us."*^{xvi}

Lack of Transparency

From the beginning the KCD project was vitiated by lack of transparency. The adjudication process was undermined by corruption. The cancellation of the first tender and the granting of the concession to the company whose pricing bid came in third place showed the untidiness of the whole process. In addition, the EIA procedure was violated, impeding adequate evaluation of the effects of the dams on the environment and the community.

Citizen participation was limited by flaws that prevented a real and genuine participation of the public, reducing the exercise to a mere formalism. The fragmentation of stages of this procedure made it difficult to understand, discuss, and analyze the initiative and its environmental impacts. It allowed the project to move forward without taking into account the nearby areas that would be affected. Even worse, there was no intervention at any time by key authorities such as the APN, the Argentine Institute of Nivology, Glaciology and Environmental Sciences (IANIGLA) and the Ministry of Environment and Sustainable Development (MAyDS). This circumstance was worrisome, since these institutions not only have responsibilities in the protection of biodiversity, especially glaciers and periglacial environment, but also have relevant information and teams of technicians and professionals with knowledge on the subject.

Profitability

One of the main problems of the dam project is that because of its isolated geographical location, there are currently no high voltage transmission lines for distribution of the total generation by the KCD. In fact, existing lines can distribute only one third of the energy generated by the project.

According to the Argentine Energy Institute, which defines itself as a promoter of hydroelectricity, the transmission system of the energy generated by the KCD would require significant investment. The Institute estimates that construction of a line for transporting the rest of the energy would cost approximately US\$ 2 billion, adding to the expense of the project. The KCD would have a productivity or plant factor of 34% and only 43% of the energy generated could be exploited by the capacity of the current power lines.

Finally, the province of Santa Cruz would not substantially profit, since it would only obtain 12% of the royalties of the electricity sold, representing only an increase of 0.25% of the provincial budget.^{xvii}

The Chinese Loan

The financing of the KCD was highlighted as unprecedented in Argentina, since it would cover not only the total cost of the work but also the internal taxes (VAT) reaching 121% of the project. No other bidder reached that percentage. The credit agreement was signed with the following banks:

- China Development Bank Corporation (US\$ 2.498.605.500)
- Industrial and Commercial Bank of China Limited (US\$ 1.414.305.000)
- Bank of China Limited (US\$ 801.439.500)

The interest rate of the loan is LIBOR plus 3.8%, which today reaches 4.8%. The payment period is 15 years with 66 months grace, equivalent to the construction period plus 9.5 years of repayment. It is estimated that 76% of the loan will be sent to the country as works certificates, while the rest will remain on Chinese bank accounts that act as payment agents for the suppliers of machinery and other capital goods.

According to the Kirchner administration, the credit would be repaid with power generation by the plants. This would guarantee the financial flow during the 6 years of construction and thus ensure completion within the defined contractual deadlines. In other words, the project would generate its own repayment. The Argentine government would only begin to pay the Chinese loan once the power plants began operation.

Credit insurance was provided by China Export & Credit Insurance Corporation (Sinosure), at a cost of 7.1% of the total financing, cancellable in five annual payments, the cost of which Argentina must fully bear. This was a measure demanded by China before beginning the disbursements of credit. Before Cristina Kirchner's trip to Beijing in January 2015, the Ministry of Economy paid Sinosure US\$ 193 million corresponding to operating expenses, commissions

and the partial credit policy of US\$ 4,714 million for the construction of the power plants. Like other agreements signed with China, the Executive Power will accept that any dispute over this process will be settled in the arbitration tribunal of the International Chamber of Commerce of France, in Paris.

The agreement signed between Xi Jinping and Kirchner contained an unusual clause that was not reported by the media at the time of signing. The contract included a cross-default clause, commonly used by financial organizations but unusual between countries. This clause states that if one of the agreed projects is canceled, the financing for all other projects is also canceled. This implies that if the Kirchner-Cepernic project is not carried out, the financing for other works also falls, among them the Belgrano Cargas, a key project for the current administration.

Supreme Court Suspends the Project

Several NGOs led the opposition to the construction of the dams, including the Argentine Association of Environmental Lawyers of Patagonia (AAAAP, for its Spanish acronym). The Banco de Bosques, together with the AAAAP, filed an appeal against the construction of the dams for non-compliance with environmental impact assessment procedures. The NGOs reported that the EIA violated the following procedures:

1. *Insufficient information.* The EIA process of the KCD did not include information on various relevant aspects necessary in assessment of environmental impacts, including impacts on the glacier zone and biodiversity of the estuary.
2. *Inadequate limitation of the area of influence.* For the APN, the EIA was limited exclusively to the area directly affected by the work, leaving out the direct and indirect impacts of operation of the dam over an area 200 km in length, which would be the area influenced by the project.
3. *Lack of participation of key organizations in the process.* No opinion was requested from state agencies directly linked to the project.
4. *Lack of background of those responsible for the environmental impact study.* The EIA of the project was carried out by the consulting firm "Serman y Asociados," which lacks credentials proving its independence from the companies awarded the contract. The NGOs also criticized the dual role of Jorge Marcolini as Under Secretary of Hydroelectric Energy and as director of the company that conducted the environmental impact study.
5. *False public hearing.* The public hearing held on December 9, 2015, was announced only six business days in advance, in the town of Comandante Luis Piedrabuena (Santa Cruz), only twenty-four hours before Macri took office.

In December 2016, the Supreme Court of Justice (SCJ) unanimously accepted the appeal, halted the construction work, and demanded a public hearing in which all parties involved could express their positions. After the suspension of the project, the Macri government devoted itself to completing the environmental impact study to be presented at the new Public Hearing, set by the Court for July 2017 at the National Congress. At the same time, the NGOs formed a coalition called "Río Santa Cruz Sin Represas" (Santa Cruz River without Dams). Once the public hearing

is conducted, the SCJ injunction will be suspended, and President Macri will have to make a final decision on the project.

China's Reaction and Macri–Xi Jinping Summit

When Macri first announced suspension of the project, the Chinese banks had already made the first disbursements (950 million). The response from China came quickly. On March 10, 2016, Beijing sent a letter to the Finance Minister, Alfonso Prat Gay, from the lawyers of the China Development Bank asking for clarification of the future of the KCD agreements. The note said: *"The Kirchner-Cepernic dams and the Belgrano Cargas are major projects promoted by the Chinese Communist Party and signed during the same political time period in Argentina and each one of the payment facility agreements of the dams together with those of the Belgrano Cargas project contain cross default clauses."*

The president of the Chinese Development Bank, Zheng Zhijie, traveled quietly to Buenos Aires and Santa Cruz for observation on the spot. The message in both cases was the same: if the dams project and the credit fall, the financing for other Chinese work in the country, such as the Belgrano Cargas railroad, as well as the currency swap with the Central Bank will be dropped. "Everything is tied" Zhijie said, referring to the cross default. The agreement for the hydroelectric plants and others has the signature and seal of President Xi Jinping, meaning that cancelling these projects would be a challenge to China's top authority.

Before Macri's visit to China, the Argentine ambassador in Beijing, Diego Guelar, warned the government about China's attitude toward suspension of the project. Macri knows that he has little room for maneuver. The consequences of suspending the project include: immediate return of the contributions already disbursed plus penalties for non-compliance, loss of jobs for the current 1,500 workers already on the site, putting at risk the total financing agreed for US\$ 13 billion and the US\$ 11 billion swap with the Central Bank.

While the government is analyzing the situation, China has made its displeasure felt. In 2016, China severely restricted the import of Argentine soybean oil. China bought from Brazil or Ukraine, and argued that it was looking for other oils, but experts maintained that it was retaliation. Other trade agreements were also frozen. According to the Ministry of Agribusiness, an export agreement on livestock was frozen after the suspension of the KCD. The message to the Argentine government was clear: China will condition any trade agreement with Argentina until Macri orders the reactivation of the dam works.

Under pressure, Macri traveled to China, but he held some advantages over his predecessor Cristina Kirchner in negotiation. First, he had diversified sources of financing. Argentina's access to international credit markets after debt repayment to the vulture funds and the diplomatic shift made by Macri had reduced the country's dependence on China. Until 2015, China had been nearly the sole provider of an economic lifeline. Second, the Argentine president arrived in Beijing 15 days after being received in Washington by Donald Trump. In addition to this show of American interest, unavailable to Kirchner, Macri held the pro tempore presidency of Mercosur and is a strong supporter of the rapprochement between this block and the Pacific

Alliance, which could lead to joint projects of great interest for China. "*China is not only interested in Argentina, but in all Latin America, because we have raw materials and food that it needs and will need even more in the future*"^{xviii} said the president of the Argentine-China Chamber, Carlos Spadone. He considers it possible that in a few decades China will turn to the South American continent even for water supply.

During his stay in China, Macri and Xi Jinping discussed substantial modifications of the dam project. Among them was a reduction in scale. The dams would have less power than initially planned by the previous government: from the 1,760 MW originally contemplated, they would be reduced to 1,290 MW of power. However, to many experts the project still appears unprofitable. They maintain that the generated megawatts will be more expensive than if they were imported. President Xi Jinping told Macri that he understood the change of government and that he knew he would have to wait for the final decision, but not eternally.

Finally, Macri and Xi Jinping discussed another important bilateral project, the construction of a fifth nuclear power plant in Argentina for an amount of US\$ 8 billion. This new project helped the negotiation regarding the KCD as it would be China's largest project in Argentina. However, the terms of the contract and the financing (supposedly 100% Chinese) have still not been discussed in detail.

Public Hearing

The new Public Hearing was attended by more than 80 participants, although it is worth noting the strikingly large space set aside for public officials, whose main role in a hearing should have been listening to civil society. In fact, the law governing the hearing procedure establishes that only those who participated in the preparation of the studies should participate, along with non-governmental organizations specializing in environmental matters, universities, academic centers, and the general public.

The new public hearing was held on July 20, 2017. The Minister of the Environment (Sergio Bergman) and the Minister of Energy (Juan José Aranguren) sat in the front row during the entire hearing. The participants can be categorized in three large groups. The first, strongly opposing the project, was composed of environmental NGOs, local inhabitants, and representatives of native people. The second, favoring the project, included government officials, electricity companies, energy associations, unions, Santa Cruz mayors and other Kirchner supporters from Santa Cruz. Between the two groups were research centers and universities, which affirmed that, although the new modified project does not affect the glaciers, it does affect the surrounding biodiversity.^{xix}

Political Cost and Conflict Within the Government

A major promise of Mauricio Macri during his campaign was environmental protection and sustainable development. After taking office, Macri created the Ministry of the Environment and

set a proactive agenda for mitigating climate change. During the campaign, Macri also promised to suspend the KCD because it was both unprofitable and harmful to the environment.^{xx}

When the Ministry of Energy presented the new KCD project with reduced power capacity and lower environmental impacts, the environmental NGOs once again opposed the project, contending that the impact throughout the San Cruz River estuary remained irreversible. Moreover, the opposition of indigenous groups continued, on the grounds that the project is illegal because the area is sacred land. It is important to notice that since the beginning of the Macri administration, confrontation between the government and native groups claiming lands in Patagonia has increased.

Macri is also sensitive to public opinion. Dams in general suffer poor reputation and opinion polls show that a majority of the population opposes the KCD project. Within the government there is also division. On the one hand, a large part of the Ministry of Environment's staff discouraged the project, including the National Parks Administration. On the other hand, the Ministry of Foreign Affairs, the Ministry of Energy, and the Ministry of Finance argued that the contract cannot be canceled and that economic consequences of suspending the project would be severe.

The Argentine government, concerned about its international image, must consider the effect of cancelling a contract. One of Macri's priorities is encouragement of foreign investments. Cancelling a signed agreement, especially with Argentina's second largest trading partner, could hinder his goal. The president's decision must be understood in the context of a country that has experienced macroeconomic instability in the last 40 years and that lacks a solid history of providing legal security for international investments. Thus, one of the Macri's goals at this juncture is to show that Argentina respects international law and that any negotiation aims to find common ground between both parties to the project.

Conclusion

Macri has to make one of the most difficult decisions of his presidency. At a time when the economy is still delicate, the new non-Peronist government must decide whether to cancel the Chinese Communist Party's most important project in Argentina. While the negative environmental and social impacts and the low profitability of the venture are clear reasons for suspending the project, the consequences of suspension could destabilize the presidency. Consequences go beyond the cancellation of other credits and extend to the return of funds already disbursed (US\$ 950 million plus punitive interests); cancellation of the US\$ 11 billion swap to keep the exchange rate stable; damage to the bilateral relationship with the country's second trading partner; and demonstration to the world (and foreign investors), once again, that Argentina does not respect agreements.

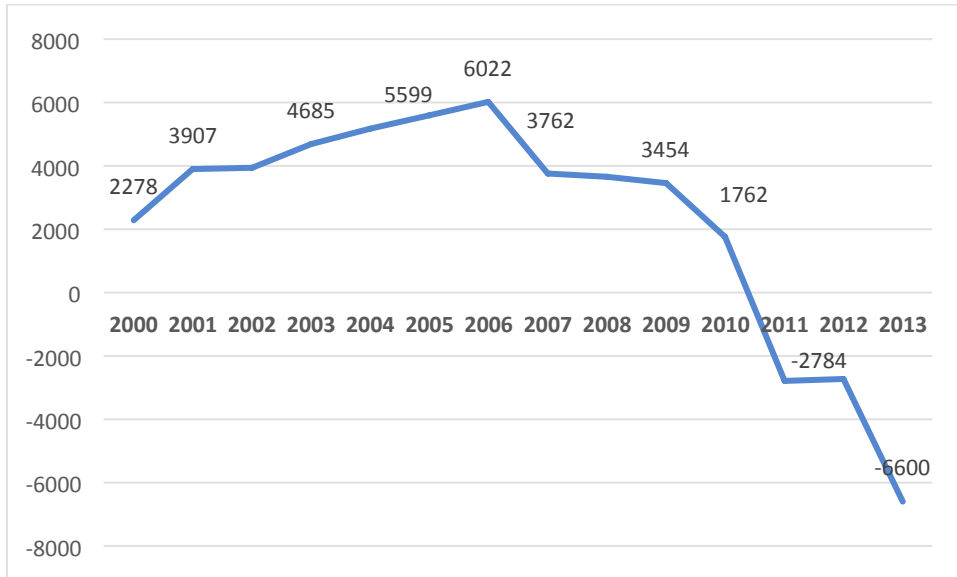
Appendices

Annex I. Hydroelectric Power Plants in Argentina Currently in Operation (50MW>)

Hydroelectric Plant	Power (MW)	Inauguration Year	Province
Yacyretá	3100	1998	Corrientes, with Paraguay
Salto Grande	1890	1979	Entre Ríos, with Uruguay
Piedra del Águila	1400	1992	Neuquén- Río Negro
El Chocón	1260	1973	Neuquén- Río Negro
Alicurá	1050	1985	Neuquén- Río Negro
Río Grande	750	1986	Córdoba
Futaleufú	472	1978	Chubut
Planicie Banderita	472	1978	Neuquén
Pichi Picún Leufú	285	2000	Neuquén- Río Negro
Los Reyunos	224	1983	Mendoza
Agua del Toro	150	1976	Mendoza
Arroyito	128	1979	Neuquén- Río Negro
Los Caracoles	121.4	2009	San Juan
Urugua-í	120	1991	Misiones
Potreriillos	120	2003	Mendoza
El Nihuil II	110	1968	Mendoza
Manuel Belgrano	100.5	1973	Salta
El Nihuil I	72	1947	Mendoza
Punta Negra	64	2015	San Juan
Potreriillos (Álvarez Condarco)	61	2003	Mendoza
Florentino Ameghino	60	1963	Chubut
Casa de Piedra	60	1996	Río Negro - La Pampa
Los Molinos I	52	1957	Córdoba

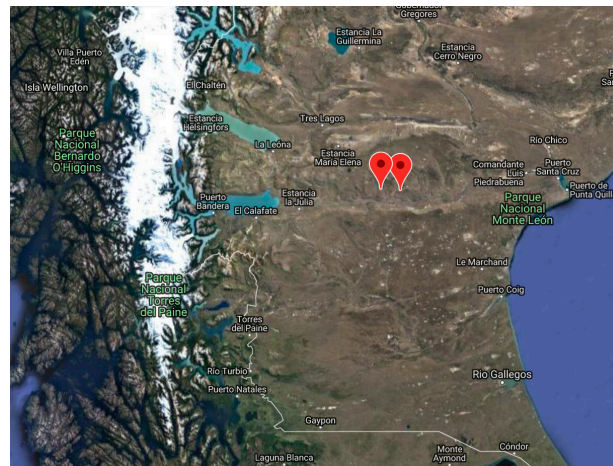
Source: Ministry of Energy

Annex II. Energy Trading Balance – Argentina 1999-2013 (US\$ million)



Source: La Nación

Annex III. Location of the Kirchner-Cepernic Dams



Source: Google Maps

Annex IV. Perito Moreno Glacier (UNESCO World Heritage Site)



Author: Hiroki Ogawa

Annex V. Endangered Species in the Santa Cruz River (Maca Tobiano)



Source: Fundación Vida Silvestre

Annex VI. Archeological Treasures in the Santa Cruz River Basin



Source: Ministry of Culture

Endnotes

- ⁱ “¿Qué pasa si Macri modifica acuerdos internacionales?”, La Nación, 13 April 2016, Link:
- ⁱⁱ Source: Economic Commission for Latin American and the Caribbean. Link: <http://estadisticas.cepal.org/>
- ⁱⁱⁱ Argentina fell into default after the severe crisis of 2001 and since then dragged a dispute with the bondholders who later did not accept the debt swaps of 2005 and 2010. The Court of Appeals of New York ruled that Argentina discriminated against the "vulture funds" and bondholders that did not participate in the 2005 and 2010 swaps. Argentina deposited more than US\$ 1,000 million to settle a June 30 2014 maturity corresponding to its restructured debt, but the court says that the amount was 1,330 million dollars plus interest at one time and in cash. Argentina claims that it cannot comply with the ruling because it would be in breach of the RUFO clause, which prevents it from offering better conditions than those accepted by the bondholders in the 2005 and 2010 swaps. In 30 July 2014, there was no agreement between the vulture funds and Argentina, and the country entered into a technical default.
- ^{iv} Moreover, since the return to democracy in 1983, the two non-Peronist governments had to resign amidst extreme economic crises (Raúl Alfonsín, 1989 and Fernando De la Rúa, 2001).
- ^v Law N° 27123. Link: http://www.cac.com.ar/data/documentos/48_ley%2027123.pdf
- ^{vi} “Diputados convirtió en ley los acuerdos entre Argentina y China”. La Voz. 25 February 2015. Link: http://www.lavoz901.com.ar/despachos.asp?cod_des=220843&ID_Seccion=5&fecemi=26/02/2015&Titular=diputados-convirtio-en-ley-los-acuerdos-entre-argentina-y-china.html
- ^{vii} “¿Qué es el swap con China?”. Chequeado. 21 December 2015. Link: <http://chequeado.com/el-explicador/que-es-el-swap-chino/>
- ^{viii} *Ibid.*
- ^{ix} *Ibid.*
- ^x “La increíble licitación de dos represas en Santa Cruz, camino del escándalo”. La Nación. 19 August 2013. Link: <http://www.lanacion.com.ar/1612048-la-increible-licitacion-de-dos-represas-en-santa-cruz-camino-del-escandalo>
- ^{xi} *Ibid.*
- ^{xii} “China demora la compra de alimentos hasta que Macri reactive las represas en Santa Cruz”. La Política Online. 18 May 2017. Link: <http://www.lapoliticaonline.com/nota/105563/>
- ^{xiii} “Energía que duele: impacto ambiental de las represas sobre el Santa Cruz”. La Nación. 17 November 2014. Link: <http://www.lanacion.com.ar/1744545-energia-que-duele-impacto-ambiental-de-las-represas-sobre-el-santa-cruz>
- ^{xiv} The Maca Tobiano inhabits lakes and lagoons of the Patagonian plateaus above 700 meters during the reproductive period (November to March). During the winter months, when a large part of the bodies of water in which it lives are frozen, it crosses the Patagonian steppe and moves towards the Atlantic coast of the same province, in the estuaries of the Santa Cruz, Coyle and Gallegos rivers. It is a species considered exclusive (endemic) of Argentina. After its discovery in 1974, its population was estimated at 3000/5000 individuals. In the present, preliminary studies would indicate that it would not exceed 300-400 reproductive pairs.
- ^{xv} “La grieta conservacionista”. Comunidad Ambiental. 24 July 2017. Link: <http://www.comambiental.com.ar/2017/07/la-grieta-conservacionista.html>
- ^{xvi} *Ibid.*
- ^{xvii} Di Paola, María Marta, “Falsas promesas: las represas en el Río Santa Cruz”. Fundación Ambiente y Recursos Naturales. 2018. Link: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&ved=2ahUKEwjT1ZGNg9zhAhXHJFAKHQFMCzMQFjAHegQIARAC&url=https%3A%2F%2Ffarn.org.ar%2Fwp-content%2Fplugins%2Fdownload-attachments%2Fincludes%2Fdownload.php%3Fid%3D25550&usq=AOvVaw00VseS0SIS8JgqkZOCJnhQ>
- ^{xviii} “China presiona a Argentina: si quiere inversiones debe cumplir antes lo firmado con Kirchner”. El País. 17 May 2017. Link: https://elpais.com/economia/2017/05/16/actualidad/1494960417_578330.html
- ^{xix} The stenographic version of the public hearing can be found at the following link: http://www.senado.gov.ar/upload/03_VT_Audiencia_Publica.pdf
- ^{xxii} “Represas en Santa Cruz: Macri analiza parar su construcción”. Clarín. 28 December 2015. Link: https://www.clarin.com/politica/represas_hidroelectricas-parar_la_construccion-mauricio_macri-nestor_kirchner-jorge_cepernic_0_ryQn0dvQg.html